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To examine how electronic peer feedback contributes to revisions in English compositions by Japanese college students, we conducted a study of peer feedback activities using a Bulletin Board System (BBS) with students in a beginning writing class at a Japanese university. The 58 participants, divided into groups of four, submitted opinion essays, which were posted on the BBS. The students commented on the papers in their own groups. Each writer reads comments, rewrote, and submitted second drafts. This study analyzed the students' electronic feedback and resultant revisions focusing on the following three aspects: 1) types of feedback observed from the online interaction, 2) quality of feedback incorporation according to the types of feedback (content/form), 3) types of revision as a result of feedback. The study offers some insights into a new type of online collaboration in English writing instruction in Japanese college writing courses.

Key words: College English writing, revision, electronic peer feedback, BBS

1. Introduction

Recently most Japanese colleges apply the process approach in English writing classes, encouraging students to generate ideas, compose multiple drafts, and revise their written work based on feedback they receive (Paulus, 1999). However, there is only limited research on how feedback is reflected in subsequent revisions, and the results are inconclusive.

In English as a Foreign Language (EFL) classroom settings, students without full-scale writing experience come to realize that composing requires painstaking recursive processing. Working in pairs or groups in a collaborative and communicative class allows students interaction and motivates them, lessening their burden and making their goals of writing successfully more feasible.

Over the years, many teachers have recognized that technology has some significance in learning, and that face-to-face classroom interaction could be supplemented by online interaction (Digiovanni et al., 2001). Warschauer (1997) notes an advantage of computer-mediated communication (CMC), indicating that where students' computers are linked in a network, the potential for collaboration and participatory interaction is increased. Yet, CMC's pedagogical effect on writing still has much to be explored and there is little empirical proof that CMC is inherently better than oral feedback for either communicating or influencing writing (Hewett,

2000).

Despite the lack of research in this area, it is speculated that BBS can be set up for a specific class or group of students as a way to encourage their independence, full participation, and sharing of information, and that it can be of value for teachers because it shares resources and expertise and builds a sense of community (Pennington, 2003).

2. Background

In theory and practice, the general benefits and limitations of peer feedback have been extensively discussed. Opponents assert that ineffective and unproductive feedback experiences may occur if peers give vague comments (Paulus, 1999), and that students tend to feel that their peers are not qualified to act as substitutes for the teacher (Rollinson, 2005). Those in favor of peer response emphasize its applicability at all stages of process writing, support its collaborative learning role (Matsuhata et al., 2003), and stress the importance of interaction for L2 development (Rollinson, 2005). Fellis and Hedgcock (1998) outline numerous advantages of peer feedback both for native English speakers and non-native speakers (see also Mendonca & Johnson, 1994; Mittan, 1989):

- Students can take active roles in their own learning;
- Students can "reconceptualize their ideas in light of their peers' reactions";
- Students can engage in unrehearsed, low-risk, exploratory talk that is less feasible in whole-class and teacher-student interactions;
- Students receive "reactions, questions, and responses from authentic readers";
- Students receive feedback from multiple sources;
- Students gain a clearer understanding of audience (reader) needs by receiving feedback on what they have done well and on what remains unclear;
- Responding to peers' writing builds the critical skills needed to analyze and revise one's own writing; and,
- Students gain confidence and reduce apprehension by seeing peers' strengths and weaknesses in writing.

Tuzi (2004) compared oral, written and electronic feedback (e-feedback) and found some significant differences among them in terms of generation, transmission, receipt, and deciphering (Table 1). Although e-feedback misses some benefits of oral feedback (i.e. sense of involvement, negotiation of meaning), networked peer-response groups help students by letting them reflect on their ideas, rehearse responses, and respond at their own pace (DiGiovanni et al., 2001), and student writers who use CMC to talk to their peer-response groups become active audiences that help writers strengthen their writing (Hewett, 2000).

Hewett (2000) compared peer response between interactive oral and CMC-generated group talk and the influence of group talk on revision, and found that medium shaped talk, and that CMC talk included more frequent direct use of peer ideas. Tuzi (2004) found that oral feedback stimulated essay changes at word level while e-feedback focused on adding new information to the original text. He concluded that e-feedback may be a viable avenue for comments among second language (L2) writers.

Kondo and Gardner (2007) conducted BBS-mediated peer feedback activities in an elementary college writing class. The study found that the students credited more

Table 1. General differences among oral, written and electronic feedback

Oral feedback	Written feedback	Electronic feedback
Face-to-face	Face-to-face/distant	More distant
Oral	Written	Written
Time dependent	Depends	Time independent
Pressure to quickly respond	Pressure to respond by next class	No pressure to quickly respond
Place dependent	Depends	Place independent
Nonverbal components	No nonverbal components	No nonverbal components
More personally intrusive	Depends	More personally distant
Oral/cultural barriers	Written/cultural barriers	Written/cultural barriers
Greater sense of involvement	Greater sense of involvement	Greater sense of anonymity
Negotiation of meaning	Negotiation of meaning	Less negotiation of meaning
Less delivery effort	Greater delivery effort	Less delivery effort
N/A	No cut & paste	Cut & paste

(Tuzi, 2004, p. 219)

useful advice from several readers rather than just one while the teacher valued monitoring of students' interaction more closely than in-class face-to-face peer feedback.

Although many modern writing courses have utilized some form of online interaction (e.g. email exchange, writing conference, teacher feedback) in teaching writing, only a limited number of studies have addressed the effect of electronic peer feedback on revisions in EFL settings.

This study examined BBS feedback and its influence on revisions for Japanese college student writers. First, the study explored the amount of feedback the students produced; second, it observed how feedback was incorporated into revision according to the types of feedback (content/form), and finally, it addressed how the feedback types affected revision.

3. Method

3. 1. Participants

The participants included 58 students enrolled in an elementary college writing class. The teacher used the process approach for writing instruction. In the first class, students were pre-tested to measure their English writing ability, and were given a questionnaire to get background concerning their writing and computer experiences. The questionnaire found that no students had lived abroad and that few students had taken a full-scale English writing course before. Thus, the class can be defined as a novice EFL writing class.

The students were divided into 15 groups based on the result of the pre-test, class attendance and assignment submissions before the final assignment (opinion essay) so that every group in the study was at a similar level. Although the BBS activity started with 58 students, only the data of 42 students who completed all the processes (i.e. submitting their first and second drafts and making comments on BBS) were analyzed.

3. 2. Procedure

Previous to the assigned opinion essay, the students had completed three paragraph compositions: 1) topic of their choice, 2) description of a thing or a process, and 3)

comparison. They had been through in-class face-to-face peer feedback for these assignments. The BBS site was remodeled from a previous web site used in 2005 (Kondo & Gardner, 2007).

The procedures for the BBS feedback activity were:

1) Students email their first drafts to the teacher.
2) Drafts are uploaded to the website.
3) Each student accesses the site, reads the first drafts of the group members, and writes comments in Japanese on the group's BBS so that everyone can read them.
4) The writer revises his/her paper based on members' comments and sends it to the teacher.

Considering their limits and frustrations in expressing their thoughts freely, their BBS comments were made in Japanese just as their previous face-to-face peer feedback interactions.

At the end of the semester, another questionnaire was administered, asking their overall impressions about the BBS experience.

4. Analysis

We analyzed: 1) types of feedback observed from the BBS online interaction (Table 2), 2) the degree to which writers incorporated feedback into revisions (Code 1, Table 3), and 3) types of feedback-induced revisions (Code 2, Table 3). Analysis 2 was based on the combinations of with/without feedback and with/without revision. Analysis 3 addressed revisions according to the feedback types (with feedback: content vs. form & without feedback (self-revision)).

Table 2. Feedback categories (Adapted from Stanley, 1992)

Content 1 Advising, Collaborating, Questioning, Announcing, Pointing, Eliciting
Content 2 Reacting
Form Grammar/spelling
Writer's response
Irrelevant comments

Table 3. Coding schemes for revisions

Code 1
a) Peer feedback + Revision (P-R); b) Peer feedback + No revision (P-NR); c) No peer feedback + Revision (NP-R)
Code 2 (adapted from Yagelski, 1995)
I) Surface (mechanical) changes (i.e., corrections of errors) Punctuation, spelling, capitalization, pluralization, word form corrections other than pluralizations, substitutions, corrected typographical errors, corrections in bibliographic format
II) Stylistic changes (substitutions) Lexical changes, phrasing (syntactic: meaning-preserving rewordings; including adding or deleting words) (structural: meaning-preserving sentence restructuring)
III) Structural changes Organization, paragraphing (moving whole paragraphs; creating new paragraphs from existing ones)
IV) Content changes Addition of new material, deleting material, altering an idea, argument, etc.

4. 1. Categorization of feedback

The categories of feedback type (Table 2) were adapted from Stanley's evaluator response code (1992). The total number of postings was counted, then comments were divided into the following categories, accompanied by representative examples from the students' BBS feedback comments (the original comments were in Japanese). The first six categories taken together constitute 'Content' comments. (Eliciting comments, which did not appear in the data, were excluded from further analysis.)

- Advising: Outlining changes that the writer should make; can be specific or general.
  Example: Would you add some facts?
- Collaborating: Beyond advising; paraphrasing the writer's words or composing their own sentences for the writer.
  Example: It may be interesting if you say...
- Questioning: Mild sort of challenge put to the writer.
  Example: What is your opinion about tobacco?
- Announcing: Walking through the essay.
  Example: The first paragraph talks about..., then the next paragraph...
- Pointing: Pointing to particular words or phrases and responding to them; less directive than 'Advising.'
  Example: You say... and it sounds like the temperature is low close to a mountain...
- Eliciting: Attempting to draw out the writer and encourage his or her participation.

Most reacting comments were kind and favorable and served as a lubricant in conversation. The present study excluded reacting comments for analysis because they induced little feedback.

- Reacting: Evaluative remarks; can be general or specific.
  Example: I think it's good that you write in easy English.

Form comments can be categorized similarly to the content comments. This study unified them into one coding category because form feedback may induce revisions regardless of the category differences.

- Form: Grammar/spelling corrections, sentence structure, expression.
  Example: You use the same word many times so it's better to substitute it with a pronoun.

Feedback normally includes replies from writers, which are considered important in interaction. There were some irrelevant comments such as double postings and apologies for mistakes.

- Responding (writer): Writer answers.
  Example: Thank you for your opinion and advice.
- Irrelevant: Double posting by mistake, apologizing.
  Example: I made a mistake. It was sent before I finished typing.

4. 2. Categorization of incorporation of feedback for revisions (Code 1)

We checked how feedback was incorporated into revisions by comparing feedback and students' texts before and after the BBS interactions, and categorized them by the revision-feedback combinations: a) revisions from peer feedback (P-R); b) no revision from peer feedback (P-NR); and c) revisions without feedback (self-revision) (NP-R) (Table 3, Code 1).

4. 3. Categorization of revisions (Code 2)

Content 1 and form feedback (Table 2) were further categorized to explore what type

of content/form feedback and self-feedback resulted in what kind of revisions. The types of changes according to Code 2 included: I) surface changes, II) stylistic changes, III) structural changes, and IV) content changes. Surface and stylistic changes regard technical aspects; surface changes can be explained as grammar corrections while stylistic changes are grammatical alterations/substitutions. Yagelski's coding scheme for revisions (1995) (Code 2) was used for the present study. To obtain reliability of the categorization of revisions, two raters tested the Coding 2 from randomly selected students' second drafts. After some adjustments, the two raters coded the 171 revisions from 42 drafts. They reached 94% agreement in coding.

5. Results and Discussion

Table 4 shows how the students gave and responded to BBS feedback. Among the feedback analyzed, content yielded more than form in number (55 vs. 39) but less in the rate of incorporation by the writer (54.5% vs. 71.8%). The content outnumbered the form possibly because in the class the teacher always stressed the precedence of content over form. Although the students faithfully followed his instruction in giving content feedback to others, they yet incorporated more form feedback than content feedback in their own papers. It can be interpreted that content is cognitively and technically challenging for revision.

One interesting phenomenon observed in BBS-mediated feedback is that once one peer made an initial comment on a certain writer's paper, the subsequent comments tended to be of the same type. Namely, if the first feedback entered for a certain paper attended to form (e.g., "Your sentences are too long.") and was followed by suggestions for the writer (e.g., "How about making them short and easy?"), the subsequent BBS entries tended to follow the same pattern. This was also true in the study previously conducted by Kondo and Gardner (2007).

Table 4. Number of comments by type & incorporation of feedback by content vs. form

Type of comment	Number of Comments	How many were incorporated?
Content	55	30 (30/55=54.5%)
Form	39	28 (28/39=71.8%)
Reaction	168	
Writer's response	18	
Irrelevant	3	
Total	278	

Nine of the 11 form comments were not too specific to be addressed: "one sentence is too long" (3); "you should correct grammatical errors" (2); "paragraphing is not good" (2); "you should use easier words" (1); "you should use a conjunction between sentences" (1). The other two comments ("If must be if"; "Rarely may be Recently") were specific but ignored. Unspecific comments might not be reflected on later revisions and specific comments were sometimes ignored perhaps because the writers did not want to follow them or were merely lazy.

Table 5. How feedback was incorporated by type

	P-R	P-NR	Total	P-R/total
Content -Advising	5	7	12	41.6%
-Collaborating	14	11	25	56.0%
-Questioning	7	7	14	50.0%
-Announcing	2	0	2	100.0%
-Pointing	2	0	2	100.0%
Content total	30	25	55	55.5%
Form	28	11	39	71.8%

Note: P-R: Peer feedback-Revision; P-NR: Peer feedback-No revision, P-R in %: Rate of incorporation of peer feedback into revision

Next, the quality of incorporation of feedback was analyzed by the types of content/form. In content feedback, 5 advising comments yielded revisions (41.6%) (Table 5). (Representative comments: "How about adding good remarks?"; "How about writing opinions by people who persist?") Advising may not be too helpful if it is not specific. When the writer followed the reviewer's comment, he/she possibly did not know what part was the most appropriate for inserting changes. Advising is ignored perhaps because writers do not know how to add sentences from vague comments or they do not think the comments fit with their ideas.

Fourteen collaborating comments were incorporated (56.0%). This category received the most reactions. Many revisions were successfully inserted, like this example. Following the comment, "It may be good to compare conditions between Japan and other countries", Student A revised:

First: ...in fact, the number of this don't decrease because they can buy at a convenience store.
Second: ...in fact, the number of this don't decrease because they can buy at a convenience store. Also there are problems. For example, in China.... And, in Japan, ...

Here is an example of misapplication of collaboration: Student B revised her essay based on the comment, "How about writing about manners?"

First: If they quarrel about trivial matters, they become to get along with each other more deeply.
Second: If they quarrel about trivial matters, they become to get along with each other more deeply. Let's use the mobile telephone well without forgetting manner.

The suggestion was to change the writer's topic to something more appealing to the reader. Because she wanted to respect the editor's comment but did not know how best to do it, she wrote one sentence about "manners" in the conclusion. Unfortunately, "manners" were not part of the original topic (about the convenience of cell phones). Of course, since collaboration is usually specific, the idea is willingly incorporated. However, if the comment is new and includes independent information in a paragraph or a change in topic, it is sometimes ignored or, if followed, flaws the

whole draft at times. With more peer feedback experience, writers may improve their revising techniques.

The following example in questioning (7 cases, 50%) shows that Student A could almost write a new full paragraph. The editor asked, "What is your opinion about tobacco?"

First: Tobacco's smoke do harm to people who don't smoke...That's why I think provision for tobacco and smokers.
Second: Tobacco's smoke do harm to people who don't smoke...Then I'm going to talk about my opinion. I think... There are reasons... First, ... That's why...

If a comment stimulates a good development to draw a fair amount of sentences with a successful addition like this example, the new part should be consistent with the topic and related to other ideas in the paragraph.

Announcing and pointing accounted for only one or two examples and could not be adequately analyzed.

Lastly, revisions were coded according to feedback type. Table 6 shows the result of revisions with/without feedback (i.e. reacting to peers' content/form feedback & self-reacting).

The result showed some tendencies. First, many surface and stylistic revisions were induced from form feedback (14, 26) and from writers' self-editing (22, 49), while content revisions were from content feedback (26) and writers' self-editing (24). There were only a few structural revisions. This means that because most form comments addressed grammar and spelling errors, the students could naturally correct the surface errors and make stylistic or syntactical changes. In addition, when they tried to revise their text without feedback, the easiest way was editing for meaning-preserving surface/stylistic revisions.

Table 6. Revisions by incorporating feedback and self-changes

Change / Feedback type	Surface	Style	Structure	Content	Total
With feedback					72
Content	1	1	2	26	30
Advise				5	5
Collaborate		1	2	11	14
Question	1			7	7
Announce				1	2
Point				2	2
Form	14	26	2	0	42(28)
No feedback (self-change)	22	49	4	24	99
Total	37	76	8	50	171

Note: The number in brackets in Form is the actual number of form comments given.

Form sometimes induced several revisions. One interesting example of form-inducing stylistic change (form-style) clearly improved the text by quite an easy and simple revision. The feedback, "It may be good to add 'First' etc. for better paragraphing." was addressed by Student C:

First: In daily life, adults lose about.... When you do something, ... Some of you may drink alcohol…
Second: First, in daily life... Second, when you do something... Third, some of you may drink alcohol...

The next example showed a form-structure revision: Student D, advised to be careful with paragraphing, divided one paragraph into two. The writer wrote the same yet with a change.

First: We can also learn on the internet. Now I tell you about that....
Second: We can also learn on the internet. (a new paragraph begins) Now I tell you...

In another example of content revision from questioning and advising feedback combined, one peer asked, "Why did you make the banana cake?" and another peer advised "Make short paragraphs longer to balance them with the third paragraph." So Student E added in the first paragraph:

First: Especially, I like cake. I want to make banana cake.
Second: Especially, I like cake. The other day, I went to my friend's house... So, I want to make banana cake.

In the next example, Student F made a short revision probably after long deliberation with the text, following one peer's announcing comment: "The problem may be the connection between the first paragraph and the following description; The first paragraph described introduction..., and you said... but you didn't mention anything about it in the following paragraphs." The writer, thus, revised the content by rephrasing the sentence.

First: But, I think it has many points of problems. It depends on how to introduce studying English.
Second: But, the success of this plan depends on how to introduce studying English.

Most self-feedback did not result in drastic content changes but minor changes in grammar and spelling. The following example, however, is the best effort of Student G to improve the text.

First: For example, when one soccer player played soccer, he made a mistake. But he did not feel down rather but smile. As you hear this, you may think he should reflect on his mistake because he did make a mistake. However, this was the best way to reflect on it for him. That is, he gave himself a relaxed state of mind through smiling. And he improved his play better.
Second: For example, I'll tell you about one soccer player. One day, when the soccer player...because he made a mistake. However, he did reflect on his mistake. This was the best way...through smiling, and he tried to improve his play better. Then, in fact, he succeeded in improving his play by smiling.

Students in peer feedback situations typically tend to focus more on surface features (i.e. grammar and spelling) than they do on content and structure (Tuzi, 2004). The

result of the present study, however, found that the content outnumbered the form (Table 4: 55 to 39). This might be the outcome of the teacher's instruction.

In view of the enhancement of their overall English ability, the use of Japanese in peer feedback may not be preferable. However, more feedback from active interaction with their peers, even if done in the native language, may be more helpful for them in terms of improving their papers, which was their primary goal in using the BBS. Perhaps BBS should not be used exclusively because conventional face-to-face interaction is still highly valued, but online interaction may be used alongside other means of student-student peer interaction and feedback.

Concerning the tendency observed in the BBS activity for later feedback to "copycat" previous feedback whether it came in the form of comments, questions, or suggestions, our findings are consistent with Sullivan and Pratt (1996)'s observation, in which they described that in computer-assisted classes, responses followed a pattern of suggestion following suggestion, comment following comment, etc. Whether or not a three- or four-member group sitting face-to-face and commenting on one writer's paper would follow the same kind of parallel responding is an interesting question for possible future research.

The present study has some limitations. The coding scheme employed to categorize the students' comments was not firmly grounded. Whether the comments were appropriate or accurate enough for the writers to incorporate into revisions was not thoroughly explored. The students' confidence as writers/readers was not precisely investigated. These concerns could surely influence the validity of the data analysis. We need further research to seek the answers to these questions.

6. Conclusion

The second questionnaire recognized that many students made comments and exchanged thoughts more actively and freely in BBS groups than face-to-face. Online interaction furthers students' awareness of and reflection on peer feedback of their writing, gives them a different and stronger sense of community which motivates them to share views in writing, and most importantly changes their attitudes about revision.

Technology pervades every social milieu. The active online interaction among students in this study implies that the benefits of electronic peer feedback are of great potential even if it has less involvement, less negotiation of meaning, and less scaffolding. E-feedback may not be a replacement for oral feedback. Nevertheless, electronic response, if it provides useful feedback promoting greater content-oriented revisions, can supplement oral and self responses, which, as many studies conclude, primarily affect meaning preserving changes at the word level (Connor & Asenavage, 1994; Leki, 1990; Tuzi, 2004).

From the potential of e-feedback as a supplement to regular face-to-face feedback, we believe that it is a viable option in peer response activities. Further study is needed in how e-feedback affects Japanese college students' writing improvement and how it can be included in peer response activities to encourage a more balanced response system. It can surely be and will continue to be a viable tool in modern EFL writing classes.

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